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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Application Number: 09/945,318
Filing Date: August 31, 2001
Appellant(s): KNIGGE ET AL.



Barbara J. Clark
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed December 19, 2005, appealing from the Office action mailed May 19, 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

| | | |
|---|---|---|
| US 6,213,645 | Beer | 4-2001 |
| US 3,246,990 | Thompson et al. | 4-1966 |
| US 5,473,866 | Maglecic et al. | 12-1995 |
| US 1,458,585 | McCrosson | 6-1923 |
| US 4,964,259 | Yivisaker et al. | 10-1990 |
| US 2,370,419 | Ray | 2-1945 |
| US 6,062,467 | Ours et al. | 5-2000 |
| US 6,594,927 | Witkowski | 7-2003 |
| US 6,245,367 | Galomb | 6-2001 |
| US 2,478,438 | Thompson | 8-1949 |
| US 5,342,635 | Schwab | 8-1994 |
| WO 98/12110 | Kraft Foods Inc. | 3-1998 |
| US 5,523,109 | Hellweg et al. | 6-1996 |
| 5,942,320 | Miyake et al. | 8-1999 |

Francis, Food and Science Technology, 2000, John Wiley & Sons Inc., Second Edition, Volume 1, pages 2622-2625

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1,10, 12, 15, 27-29, 41,42, 59-61, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beer (US 6213645 B1 ) in view of Thompson et al. (US 3246990), Francis, Maglecic et al. (US 5473866), McCrosson (US 1458585) and Ylvisaker et al. (US 4964259).

Beer teaches a bag capable of forming an air-tight vacuum-sealed rectangular bag that is made from a single laminated sheet and does not expose a product contained therein to the degradation effects of air (Column 1, lines 10-45 Column 2, lines 23-28, Figure 1) or light because it includes an oxygen barrier of foil, which would result in an opaque bag and a permeability of no greater than 0.013 cc/100 sq. in. per day as recited in claims 10 and 59-61. Consequently, less than 1 ppm hexanal would be present, as recited in claim 1, in the interior portion of the bag since oxygen and light cause oxidation/rancidity, and a vacuum-sealed opaque oxygen impermeable package would prevent oxygen or light from contact with the product. The bag also includes a moisture barrier (e.g. polyethylene) on the exterior of the oxygen barrier as recited in claim 65, a semi-rigid portion (i.e. gusseted) as recited in claim 27, an interior structure in the form of a rectangle as recited in claim 28, a reclosable seal (e.g. a pressure sensitive cold seal and a tin tie, clip or zipper) as recited in claims 41and 42, and is suitable for preserving free flowing, ready to eat breakfast cereal in a bag with structurally integrity to withstand mishandling during shipping and yet the bag is easy to

open (Abstract; Column 2, lines 5-9; Column 3, lines 13-40; Column 4, lines 15-67; Column 5, line 7 to Column 6, line 3; Figures 5 and 6). However, Beer is silent in the particular type of free flowing ready to eat breakfast cereal, such as a frangible puffed cereal, that has a crush resistance no less than 7.0 PSIA, or 14.7 PSIA as recited in claim 15, the bag wherein vacuum sealing allows the package to be filled with approximately 20-60% more cereal, as recited in claim 1. Additionally, although Beer teaches the bag has structural integrity to withstand mishandling during shipping, Beer is silent in teaching that it is sufficiently rigid to reduce breakage of the cereal therein per se as recited in claim 1.

With respect to puffed cereal and crush resistance, Thompson et al. '990 teach a crisp and friable (i.e. frangible), free-flowing, puffed ready to eat cereal that may be formed into any desired shape, such as a ring, and stays crisp in milk for a prolonged period of time. The product can have anywhere from 5-25% sugar, 1.5-5% fat, 3-5% moisture and can be made from a variety of flours (Column 1, lines 25-42, 60-70; Column 2, lines 35-40, Examples). Francis teaches crush resistance depends on flour quality (Figure 5), water activity (Figure 13 and Table 11), density (Figure 14) and water content (Figure 14). Therefore, it would have obvious to modify the ready to eat, free-flowing cereal Beer and include the free-flowing frangible puffed ready to eat cereal of Thompson et al. '990 because the free-flowing ready to eat cereal may be made into any desired form and stays crisp in milk for a prolonged period of time. To select such a cereal with a compression or crush resistance greater than 7.0 PSIA or 14.7 PSI, would have been an obvious result effective variable of the particular moisture level, water

activity, and type of flour selected since Thompson et al. teach (1) crisp and friable but can maintain crispness in milk for a prolonged period of time and (2) selecting a variety of fat, sugar, and moisture levels (which affect moisture content and water activity) and various types of flours, which, in light of Francis, will affect the crush or compression resistance.

With respect to a vacuum bag providing sufficient rigidity to reduce breakage of the cereal and vacuum sealing allowing 20-60% more cereal, Maglecic et al. teach settling product in a bag prior to vacuum sealing will provide sufficient rigidity to reduce breakage as compared to conventional sealing and allow, in the case of French fries, 30% more product (i.e. reduce the packaging volume required by 30%). Maglecic et al. teach a vacuum will retain the product in a tight alignment with maximum bulk density (Column 1, lines 10-40; Column 5, lines 20-48; Column 6, lines 52-65). Mccrosson is relied on further evidence that drawing sufficient air from a bag during vacuum sealing so that the bag walls will be drawn in tightly toward the material and conform around the material held within the bag. Mccrosson teaches that even with a bag made of thin material will provide a sufficiently rigid bag structure about a crushable item (e.g. cigar) to reduce breakage during shipping (Page 1, lines 32-51; Page 2, lines 31-65; Figure 1). Ylvisaker et al. teach the degree to which a product settles in bag by conventional filling (or the bulk density) is a function of the geometry of the particular product (Column 1, lines 15-42).

Therefore, to modify Beer and provide a rigid structure to reduce breakage during shipping would have been obvious depending on (1) the degree of settling prior to

drawing the vacuum, (2) the resulting bulk density after settling, and (3) the degree of vacuum applied, since Maglecic et al. teach a vacuum bag will provide a rigid structure that will reduce breakage when the food product is first settled to maximize the bulk density, Ylvisaker et al. teach the degree to which settling is possible depends on the geometry of the material, Maglecic et al. teach withdrawing a sufficient amount of air from a material with maximized bulk density will maintain the product in a tight alignment, and McCrosson teaches a vacuum bag made of even thin material is capable of tightly conforming around a packaged good to provide a rigid structure to prevent breakage. To increase the amount of the material by 20-60% that would occupy the bag under vacuum conditions as opposed to non-vacuum conditions would have been obvious depending on the particular shape of the cereal since Maglecic et al. teach by settling French fries (or maximizing the bulk density) prior to vacuum sealing one can increase the filling capacity and Ylvisaker et al. teach the bulk density of a product is dependent on the its shape. Thus, uniform shapes (e.g. spheres) would allow for a greater filling capacity than irregular shapes (e.g. stars) under vacuum packaging conditions.

Regarding claim 12, although Beer is silent in teaching the exterior portion of the bag is textured, as discussed above McCrosson teaches that drawing sufficient air from a bag during vacuum sealing will cause the walls be drawn in tightly toward the material and conform around the material held within the bag, resulting in a sufficiently rigid structure to protect the material (Page 1, lines 32-51; Page 2, lines 31 to 65; Figure 1). Therefore, it would have been obvious to include a texture on the exterior portion of the

bag, since McCrosson teaches by drawing sufficient vacuum, the bag will collapse around the material and one will obtain a sufficiently rigid structure to protect the material held within the bag.

Regarding claim 29, Beer teaches a vacuum-sealed oxygen impermeable opaque bag containing flowable foodstuffs, such as ready to eat cereals, but is silent in teaching a particular gas or that the flowable foodstuffs include snack chips. As discussed above, in the rejection of claim 1, Thompson et al. '990 teach a crisp and friable (i.e. frangible), free flowing, puffed ready to eat cereal that may be formed into any desired shape. Therefore, to further include a puffed-cereal based snack chip would have been obvious, depending on the particular size of puffed cereal based material selected, since a puffed cereal based material produced for breakfast cereals would certainly be consumable as a snack without milk and could be of any desired shape.

Claims 4 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beer (US 6213645 B1) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US 4964259), as applied to claims 1, 10,12, 15, 27-29, 41,42, 59-61, and 65 above, further in view of Ray (US 2370419).

Beer is silent in teaching an exterior carton of paperboard. Ray, however, is relied on as evidence of the conventionality of placing a vacuum-sealed bag of cereal in an exterior carton, if desired (See Column 1, lines 1-35; Column 1 line 49 to column 2,

line 2; Column 3, lines 1-56; Column 4, lines 59-63, and Column 10-23). Therefore, to place the bag of Beer into an exterior carton would have been obvious, depending on the desired type of exterior packaging appearance since Ray teaches vacuum-sealed cereal containing bags may be stored in cartons if desired and it may be desirable to place the vacuum bag of Beer in a carton so that it would have a better physical fit on a store shelf comprising other cereal cartons. It would have been further obvious to select a paperboard carton, since this is a conventionally well-known carton material for breakfast cereals.

Claims 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beer (US 6213645 B1 ) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US 4964259), further in view of Ray (US 2370419), as applied to claims 4 and 48 above, further in view of Ours et al. (US 6062467).

Modified Beer is silent in teaching a perforated area for opening the bag and a paperboard carton. However, Ours et al, who also teach a rectangular reclosable bag, made from a laminated sheet with an oxygen barrier, a moisture barrier held within a paperboard carton, teaches providing a perforated area in the bag for the convenience of opening and dispensing the breakfast cereal, as well as re-closing (Column 1, lines 5-31; Column 2, lines 60-64; Column 3, lines 30-40; Column 4, lines 20-28; Column 5, line 38 to column 6, line 48). Therefore, it would have been obvious to further modify Beer since Ours et al. teach providing a perforated area in the bag near the top when the bag

is inside a paperboard carton would provide a convenient and reclosable way of dispensing the breakfast cereal.

Claims 5-8, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beer (US 6213645 B1) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US 4964259) as applied to claims 1, 10, 12, 15, 27-29, 41, 42, 59-61, and 65 above, further in view of Witkowski (US 6594927 B2).

Modified Beer is silent in teaching any particular location of premiums or coupons for the packaged cereal bar. Witkowski teaches it notoriously well known and desirable to provide premiums and/or coupons with cereal based products that are packaged in boxes, but that food manufactures have found it difficult to provide such items for products packaged in bags/wrappers with affixing including pressure sensitive labels, preprinted information, on the inside or outside of the package, with a separate compartment as recited in claims 5-8,13-14 (Column 1, lines 16-55; Column 2, line 59 to Column 3, line 10). Witkowski teaches how to provide such features for bag and wrappers in an efficient manner (Column 3, lines 14-42; Column 3, line 54 to Column 4, line 25; Column 4, lines 40-50; Column 7, line 22 to Column 8, line 40; Column 10, line 59 to Column 11, line 16). Note the "separate" compartment is understood to be hidden windows within multiple layers of a pouch (Column 17, line 64 to Column 18, line 6).

Therefore, it would have been obvious to further modify the bags of Beer and include premiums or coupons by affixing pressure sensitive labels, preprinted

information, on the inside or outside of the package, or with a separate compartment as recited in claims 5-8,13-14, since Witkowski teaches it notoriously well known and desirable to provide premiums and/or coupons with cereal based products that are packaged in boxes and teaches how providing such features in a much more efficient way so that products packaged in bags/wrappers may offer the desirable premiums and coupons.

Claims 9, 11, 33-35, 37, and 38 are rejected under 35 U.S.C. 1O3(a) as being unpatentable over Beer (US 6213645 B1) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US 4964259), as applied to claims 1,10, 12, 15, 27-29, 41, 42, 59-61, and 65 above, further in view of Galomb (US 6245367 B1).

Regarding claims 9 and 11, modified Beer is silent in teaching a translucent bag or transparent window. Galomb also teaches breakfast cereal bags with barrier layers and metal foil layers like Beer. However, Galomb further teaches if desired one may provide translucent walls or even a transparent window to view the product (Abstract; Column 4, lines 15-34). Therefore, it would have been an obvious to modify the walls of Beer to provide a translucent bag or window, depending on if it was desirable for a consumer to view the packaged product since Galomb teaches providing translucent walls or even a transparent window for a cereal bag may be done if desired for viewing the product.

Regarding claims 33-38, modified Beer is silent in teaching the breakfast cereal bag has two compartments, two different products (one particulate, one non-particulate), or the specific water activity, as recited in claims 33-38. Galomb teaches packaging two different products including, breakfast cereals, in a two compartment bag, with two different products, wherein the water activity is at least about 0.1 for a nonparticulate portion (other foods could be dry such as sugar or gellable products) and 0.2-0.4 for the particulate cereal (i.e. desired cereal crispness for either flake or pellets, as evidenced by Francis (Column 2, Paragraph 2, Page 2622, table 13(a)) would have a water activity in this range) for the convenience of eating together (Abstract; Column 8, lines 32-63). Therefore, it would have been obvious to modify Beer and include a non-particulate product with a water activity of at least 0.1 and the cereal with a water activity of 0.2-0.4 since it would provide the convenience of having a package holding two items that are stored separately but are eaten together. To include a raisin with a water activity of 0.6 would have been obvious, depending on the desired item for eating together with the cereal, since Galomb teaches providing non-particulate items that would be desirable to consume with a breakfast cereal and it was notoriously well known to consume raisins with a breakfast cereal.

Claims 16, 17, 21, 22, 43, 45-47, and 51-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beer (US 6213645 B1) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US 4964259) as applied to claims 1 ,10, 12, 15, 27-29, 41, 42, 59-

61, and 65 above, further in view of Thompson et al. (US 2478438).

Regarding claims 16, 17, 21, 22, and 43, modified Beer includes ring shaped pieces, as recited in claim 21, but is silent in teaching the ready to eat cereal comprises whole grain rice or oat, as recited in claims 16 and 43, or soy flour as recited in claim 17, or includes irregular shapes as recited in claim 22. Thompson et al. '438 teach it is desirable to combine a variety of cereals, including whole rice grain as recited in claims 16 and 43, with soybeans, which would comprise soy flour as recited in claim 17, to complement their nutritional properties and modify their deficiencies or excesses and are less costly ingredients than conventional refined flours, wherein the formulation may be formed in either a particular shape such as a ring or a irregular shape (i.e. a flake) as recited in claim 17 (Column 1, lines 1-14 and 38-47; Column 3, lines 38-65; Column 5, lines 3-46; Examples). Therefore, it would have been obvious to further modify Beer and include whole grains, such as oat or rice and soy flour, since Thompson et al. '438 teach using the grains and soybeans in combination will provide an improve nutritional formula, and by using whole grains, the cost of ingredients is lower. It would have been further obvious to select an irregular shape, depending on the desired form of puffed cereal, since Thompson et al. '438 teach puffed cereals can be made into either a regular shape, such as a ring, or an irregular shape, such as a flake.

Regarding claims 45-47 and 51-57, modified Beer teaches a seal strong enough to maintain vacuum conditions such as a pressure sensitive cold seal and a tin tie, clip or zipper, a brick/rectangular shaped bag with a bottom, opening at the top, and sides

(Abstract; Column 1, lines 38-45; Column 2, lines 5-9; Column 3, lines 13-40; Column 4, lines 15-67; Column 5, line 7 to Column 6, line 3; Figures 5 and 6).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beer (US 6213645 B1) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US 4964259) as applied to claims 1, 10,12, 15, 27-29, 41, 42, 59-61, and 65 above, further in view of Schwab et al. (US 5342635).

Beer is silent in teaching marbits. Schwab et al. teach it is well known to include marbits with cereal packages for a pleasing variety (Column 1, lines 5-34). Therefore, it would have been obvious to further include marbits with the cereal of Beer since it was known that this is a pleasing variety of cereal.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beer (US 6213645 B1) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US 4964259), as applied to claims 1, 10, 12, 15, 27-29, 41, 42, 59-61, and 65 above, further in view of Kraft Foods Inc. (W098121 10).

Beer teaches gas flushing (Column 1, lines 35-45) a vacuum-sealed oxygen impermeable opaque bag containing flowable foodstuffs, such as ready to eat cereals, but is silent in teaching a particular gas. Kraft Foods Inc. also teaches a rectangular reclosable vacuum sealed oxygen impermeable, opaque bag for free flowing food items

and uses a Nitrogen flush to protect the cereal products (e.g. rice flakes) against oxidation, (Abstract; Pages 1, 5, 6, 11, 12,17, 20, 37, and 43). Therefore, it would have been obvious to further modify Beer and flush the bag with Nitrogen, since Beer teaches preventing the degradation effects of air by gas flushing vacuum sealed bags and Kraft Foods Inc. teach a Nitrogen flush will protect cereal products against oxidation when the cereal products held in vacuum sealed bags.

Claim 39 is rejected under 35 U.S.C. 1o3(a) as being unpatentable over Beer (US 6213645 B1) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US 4964259) as applied to claims 1, 10, 12, 15, 27-29, 41, 42, 59-61, and 65 above, further in view of further in view of Hellweg et al. (US 5523109).

As discussed above in the rejection of claim 1, Beer teaches an air-tight vacuum sealed bag holding a free-flowing ready to eat cereal and Thompson et al. '990 teach a free-flowing ready to eat cereal that are puffed, crisp and friable (i.e. frangible) that may be formed from a variety of flours, such as oat flour (Column 1, lines 25-42 and 60-70; Column 2, lines 35-40; Examples). Hellweg et al. teach treating oat flour to inactivate enzymes, and thus prevent rancidity, in puffed oat flour based products (Abstract; Column 3, lines 35-53). Therefore, it would have been obvious to modify Beer and select a puffed oat flour-based cereal product, depending on the desired type of flavor or nutrients desired since Beer teaches a free-flowing breakfast cereal and Thompson et al. teach free-flowing breakfast cereals can be made from a variety of flours, which

would vary in flavors and nutrients. It would have been further obvious to treat oat flour to prevent rancidity since Hellweg teaches inactivating enzymes in oat flour to prevent rancidity when oat flour is used for puffed cereal based products.

Claims 62-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beer (US 6213645 B1) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US 4964259), as applied to claims 1, 10, 12, 15, 27-29, 41, 42, 59-61, and 65 above, further in view of Miyake et al. (US 5942320).

Beer teaches an oxygen barrier layer and a moisture barrier layer with polyethylene and aluminum foil, but is silent in teaching a metallized polymeric composite and PP, PE, PET or PLA as recited in claim 62, oxygen scavengers or antioxidants as recited in claim 63, or layers of aluminum oxide coated polyethylene, polyester, glass or ceramic, and a polyester seal interior of the aluminum oxide coated polyethylene layer as recited in claim 64. Miyake et al. teach barrier composite films for dry foods that have mechanical strength and are good for preservation that include oxygen and moisture barriers, including polyethylene and metallized polymeric layer as moisture barriers. Miyake et al. teach layers of aluminum oxide coated polyethylene, polyester, glass or ceramic, and a polyester seal interior of the aluminum oxide coated polyethylene layer (Column 1, lines 5-13; Column 3, lines 12-22; Column 4, line 40 to Column 5, line 2; Column 5, lines 33-42; Column 10, line 33 to Column 11, line 25; Column 15, line 49-63; Column 17, lines 25-35). Therefore, it would have been obvious

to include a metallized polymeric layer as the moisture barrier and a substrate of polyethylene, in addition to an oxygen barrier, antioxidants, as recited in claim 63, or even layers of aluminum oxide coated polyethylene, polyester, glass or ceramic, and a polyester seal interior of the aluminum oxide coated polyethylene layer since Miyake et al. teaches these oxygen moisture barriers film-based food packages will have sufficient mechanical strength and provide good preservation for dry foods.

Claim 77 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beer (US 6213645 B1) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US 4964259).

Beer teaches a bag capable of forming an air-tight vacuum-sealed rectangular bag that is made from a single laminated sheet and does not expose a product contained therein to the degradation effects of air (Column 1, lines 10-45; Column 2, lines 23-28; Figure 1) or light because it includes an oxygen barrier foil layer (i.e. the sheet is not oxygen permeable and opaque). Consequently, less than 1 ppm hexanal would be present in interior portion of the bag since oxygen and light cause oxidation/rancidity, and a vacuum-sealed opaque oxygen impermeable package would prevent oxygen or light from contact with the product. The laminate further includes a moisture barrier. The bag is suitable for preserving free flowing ready to eat breakfast cereal in a bag with structurally integrity to withstand mishandling during shipping and yet the bag is easy to open (Abstract; Column 2, lines 5-9; Column 3, lines 13-40; Column 4, lines 15-67; Column 5, line 7 to Column 6, line 3; Figures 5 and 6).

However, Beer is silent in the particular type of free flowing ready to eat breakfast cereal such as a frangible puffed oat cereal that has a crush resistance no less than 7.0 PSIA, and that the vacuum sealing allows the package to be filled with approximately 20-60% more cereal. Additionally, although Beer teach the bag has structural integrity to withstand mishandling during shipping, Beer is silent in teaching that it is sufficiently rigid to reduce breakage of the cereal therein per se.

With respect to puffed cereal and crush resistance, Thompson et al. '990 teach a crisp and friable (i.e. frangible), free-flowing, puffed ready to eat cereal that may be formed into any desired shape, such as a ring, and stays crisp in milk for a prolonged period of time. The product can have anywhere from 5-25% sugar, 1 .5-5% fat, 3-5% moisture and can be made from a variety of flours (Column 1, lines 25-42 and 60-70; Column 2, lines 35-40; Examples). Francis teaches crush resistance depends on flour quality (Figure 5), water activity (Figure 13 and Table 11), density (Figure 14) and water content (Figure 14). Therefore, it would have obvious to modify the ready to eat, free-flowing cereal Beer and include the free-flowing frangible puffed ready to eat cereal of Thompson et al.'990 because the free-flowing ready to eat cereal may be made into any desired form and stays crisp in milk for a prolonged period of time. To select such a cereal with a compression or crush resistance greater than 7.0 PSIA or 14.7 PSI, would have been an obvious result effective variable of the particular moisture level, water activity, and type of flour selected since Thompson et al. teach (1) crisp and friable but can maintain crispness in milk for a prolonged period of time and (2) selecting a variety of fat, sugar, and moisture levels (which affect moisture content and water activity) and

various types of flours, which, in light of Francis, will affect the crush or compression resistance.

With respect to a vacuum bag providing sufficient rigidity to reduce breakage of the cereal and vacuum sealing allowing 20-60% more cereal, Maglecic et al. teach settling product in a bag prior to vacuum sealing will provide sufficient rigidity to reduce breakage as compared to conventional sealing and allow, in the case of French fries, 30% more product (i.e. reduce the packaging volume required by 30%). Maglecic et al. teach a vacuum will retain the product in a tight alignment with maximum bulk density (Column 1, lines 10-40; Column 5, lines 20-48; Column 6, lines 52-65). McCrosson is relied on further evidence that drawing sufficient air from a bag during vacuum sealing so that the bag walls will be drawn in tightly toward the material and conform around the material held within the bag. McCrosson teaches that even with a bag made of thin material will provide a sufficiently rigid bag structure about a crushable item (e.g. cigar) to reduce breakage during shipping (Page 1, lines 32-51; Page 2, lines 31 to 65, Figure 1). Ylvisaker et al. teach the degree to which a product settles in bag by conventional filling (or the bulk density) is a function of the geometry of the particular product (Column 1, lines 15-42).

Therefore, to modify Beer and provide a rigid structure to reduce breakage during shipping would have been obvious depending on (1) the degree of settling prior to drawing the vacuum, (2) the resulting bulk density after settling, and (3) the degree of vacuum applied, since Maglecic et al. teach a vacuum bag will provide a rigid structure that will reduce breakage when the food product is first settled to maximize the bulk

density, Ylvisaker et al. teach the degree to which settling is possible depends on the geometry of the material, Maglecic et al. teach withdrawing a sufficient amount of air from a material with maximized bulk density will maintain the product in a tight alignment, and McCrosson teaches a vacuum bag made of even thin material is capable of tightly conforming around a packaged good to provide a rigid structure to prevent breakage. To increase the amount of the material by 20-60% that would occupy the bag under vacuum conditions as opposed to non-vacuum conditions would have been an obvious depending on the particular shape of the cereal since Maglecic et al. teach by settling French fries (or maximizing the bulk density) prior to vacuumsealing one can increase the filling capacity and Ylvisaker et al. teach the bulk density of a product is dependent on the its shape. Thus, uniform shapes (e.g. spheres) would allow for a greater filling capacity than irregular shapes (e.g. stars) under vacuum packaging conditions.

Claims 78-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beer (US 6213645 B1 ) in view of Thompson et al. (US 3246990) and Francis and Maglecic et al. (US 5473866) and McCrosson (US 1458585) and Ylvisaker et al. (US4964259), as applied to claim 77 above, further in view of Hellweg et al. (US 5523109).

Although Beer teaches a vacuum sealed, oxygen impermeable, and opaque bag (features which prevent oxidation and rancidity), Beer is silent in teaching that the

rancidity is substantially eliminated from the oat cereal material itself, as recited in claim 78 or that the shelf life is doubled as recited in claim 79.

Hellweg et al. teach treating oat flour to inactivate enzymes, and thus prevent rancidity in puffed oat flour based products (Abstract, Column 3, lines 35-53). Therefore, it would have been obvious to further modify Beer and treat oat flour to prevent rancidity, as recited in claim 78, since Beer's bag will prevent the cereal based material's exposure to oxygen and light during the shelf life, but it does not take into account eliminating the effects of oxygen and light prior to packaging (e.g. during conventional cereal processing steps, such as puffing), and Hellweg teaches inactivating enzymes in oat flour to prevent rancidity when oat flour is used for puffed cereal based products. To obtain nearly double the shelf life would have been obvious, depending on the basis of comparison, since the combination of (1) an oxygen free/light free package and (2) pre-treatment of the flour prior to the puffed cereal production process would increase the shelf life of the puffed cereal most significantly when compared to non-treated flour cereal that is not packed, but less a non-treated flour based cereal stored in a transparent gas flushed bag held in a carton.

**(10) Response to Argument**

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was

within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument based upon the age of the references, contentions that the reference patents are old are not impressive absent a showing that the art tried and failed to solve the same problem notwithstanding its presumed knowledge of the references. See *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977).

In regard to claims 1, 10, 12, 15, 27-29, 41, 42, 59-61, and 65, Applicant asserts that the Examiner has not established a prima facie case of obviousness because the bag taught by Beer is intended to hold non-frangible, free flowing products. Beer teaches "coffee (beans or ground), powdered drink mix, ready to eat breakfast cereal, lawn/garden chemicals, and the like." Applicant believes that one of ordinary skill in the art would not have been motivated to utilize the bag of Beer for ready to eat breakfast cereal that is a frangible puffed cereal because one of ordinary skill in the ad would recognize that the ready to eat breakfast cereals disclosed by Beer are limited to hold non-frangible, free flowing products. In response to applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior ad to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves

or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, neither Beer nor any other evidence made of record would suggest that the "ready to eat breakfast cereal" disclosed by Beer is limited to any particular type of breakfast cereal, such as non-frangible cereals. The rejection is based on the facts that Beer teaches a mercantile package for ready to eat breakfast cereals that provides structural integrity two withstand mishandling during shipping and Thomas et al. provides motivation to select a particular ready to eat breakfast cereal for the mercantile package: a puffed cereal that offers the advantages of staying crispy in milk and is available in any desired shape.

Applicant contends that the recited bag is capable of being filled with approximately 20-60% more material. However, as stated in the Office Action mailed May 19,2005, this particular feature is a known characteristic of vacuum sealing food Applicant contends that the recited bag is capable of being filled with items in a bag and further depends on the amount of settling prior to vacuum sealing (e.g. 30% more French Fries were packaged by Maglecic et al. in a vacuum bag).

Applicant argues that that Beer lacks the requisite void spacing such that the products can be filled with 20-60% more material than a non vacuum-sealed package. However, as stated above, it would have been obvious to use the free-flowing frangible puffed ready to eat cereal of Thompson et al. '990 as the ready to eat, free-flowing cereal of Beer because the free-flowing ready to eat cereal may be made into any desired form and stays crisp in milk for a prolonged period of time. This modification

would result in sufficient void spacing. It is also noted that French fries are interpreted to be free flowing.

Applicant argues that Francis is not pertinent because it does not disclose the relation between crush resistance and vacuum packaging. However, Francis was relied on merely to show that it was well established in the art to modify certain components in ready to eat cereal in order to achieve a desired crush resistance.

Applicant argues that Yivasker teaches away from the present invention. However, Applicant refers to the specific embodiment that Yivasker is directed to and this embodiment was not relied on. The Examiner cited Yivasker merely for the teaching that the degree to which a product settles in a bag by conventional filling (or the bulk density) is a function of the geometry of the particular product.

Applicant states that the Packaging Technology reference supports Applicant's assertion that it is a surprising result, which none of the references teach or suggest, that a fragile cereal can be packaged in a vacuum bag. While Packaging Technology teaches vacuum may break soft or fragile items, it does not teach or suggest that those soft or fragile items include puffed cereal compositions. Furthermore, the references applied in the rejection, contrary to Packaging Technology, actually teach "soft items" in vacuum bags, such as cigars by McCrosson and French fries by Maglecic et al.

Claims 4 and 8 depend from independent claim 1 and also remain rejected for the reasons above.

Claims 49 and 50 depend from independent claim 1 and also remain rejected for the reasons above.

Claims 5-8, 13, and 14 depend from independent claim 1 and also remain rejected for the reasons above.

Claims 9, 11, 33-35, 37, and 38 depend from independent claim 1 and also remain rejected for the reasons above.

Claims 16, 17, 21, 22, 43, 45-47, and 51-57 depend from independent claim 1 and also remain rejected for the reasons above.

Claim 24 depends from independent claim 1 and also remains rejected for the reasons above.

Claim 32 depends from independent claim 1 and also remains rejected for the reasons above.

Claim 39 depends from independent claim 1 and also remains rejected for the reasons above.

Claims 62-64 depend from independent claim 1 and also remain rejected for the reasons above.

Applicant's arguments with regard to claim 77 are unpersuasive for the same reasons state above with regard to claim 1.

Claims 78 and 79 depend from independent claim 1 and also remain rejected for the reasons above.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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